CLEAN VERSION OF ALL PENDING CLAIMS

1. (Amended once) A method of forming sidewall spacers adjacent opposing vertical sides of a gate electrode, comprising:

forming at least one gate electrode over a substrate;

forming, at a first temperature in a range of approximately 550°C to 580°C, a first silicon oxide film conformally over the substrate and gate electrode from a combination of gases including bis-(tertiarybutylamino)silane and oxygen;

forming, at a second temperature in a range of 580°C to approximately 600°C, a silicon nitride film conformally over the first silicon oxide film from a combination of gases including bis-(tertiarybutylamino)silane; and

forming a second silicon oxide film over the silicon nitride film from a combination of gases including bis-(tertiarybutylamino)silane and oxygen.

2. (Amended once) The method of Claim 1, wherein said forming the first silicon oxide film comprises providing one or more wafers in a furnace at the first temperature and flowing BTBAS and oxygen into the furnace.

3. (Amended once) The method of Claim 2, wherein said forming the silicon nitride film and the second silicon oxide film comprises keeping the one or more wafers in the furnace.

4. (Amended once) The method of Claim 2, wherein said forming the silicon nitride film comprises maintaining the one or more wafers in the furnace at the second temperature and flowing BTBAS and NH_3 into the furnace.

5. (Amended once) The method of Claim 4, wherein said forming the second oxide film comprises maintaining the one or more wafers in the furnace at the first temperature and flowing BTBAS and oxygen into the furnace.

6. (Cancelled)

7. (Amended once) The method of Claim 1, further comprising purging the furnace prior to forming the silicon nitride film and subsequent to forming the first oxide film.

8. (Amended once) The method of Claim 7, wherein said purging the furnace comprises ceasing the flow of BTBAS and oxygen, and flowing N_2 into the furnace.

9. (Amended once) The method of Claim 1, further comprising purging the furnace prior to forming the second oxide film and subsequent to forming the silicon nitride film.

10. (Amended once) The method of Claim 9, wherein said purging the furnace comprises ceasing the flow of BTBAS and NH_3, and flowing N_2 into the furnace.

11. (Amended once) A method of forming a transistor, comprising:

forming at least one gate electrode over a gate dielectric layer, the gate dielectric layer disposed on a substrate;

depositing a first silicon oxide film conformally over the substrate and gate electrode from a combination of gases comprising bis-(tertiarybutylamino)silane and oxygen at a temperature of between approximately 550°C and 580°C;

depositing a silicon nitride film conformally over the first silicon oxide film from a combination of gases comprising bis-(tertiarybutylamino)silane and ammonia at a temperature of between 580°C and approximately 600°C;

depositing a second silicon oxide film over the silicon nitride film from a combination of gases comprising bis-(tertiarybutylamino)silane and oxygen; and

forming a first sidewall spacer.

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12. The method of Claim 11, wherein the first silicon oxide, the silicon nitride, and the second silicon oxide are deposited in-situ.

13. The method of Claim 11, wherein depositing the first silicon oxide, the silicon nitride, and the second silicon oxide are all done in a first furnace.

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14. (Amended once) The method of Claim 11, wherein the furnace is a vertically oriented furnace and the BTBAS, the oxygen, the nitrogen, and the ammonia each flow into the furnace from a bottom of the furnace.

15. (Amended once) The method of Claim 11, further comprising implanting dopants to form a deep source/drain region in the substrate adjacent at least two opposing sides of the gate electrode.

16. (Amended once) The method of Claim 14, wherein said forming the first sidewall spacer comprises anisotropically etching the second silicon oxide layer, the silicon nitride layer, and the first silicon oxide layer.

17. (Amended once) The method of Claim 16, further comprising removing the second oxide layer to form L-shaped spacers.

18. The method of Claim 17, further comprising implanting dopants to form a deep source/drain region in the substrate, adjacent to each opposing side of the L-shaped spacers.

19. (Amended once) The method of Claim 18, wherein said implanting dopants includes a partial passage of ions from an ion beam through a portion of the L-shaped spacers.

20-23. (Cancelled)

Claim Rejections - 35 U.S.C. § 103

Claims 1-14, 16 and 17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,150,223 ("Chern") in view of U.S. Patent No. 5,976,991 ("Laxman"). Claims 15, 18, and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chern in view of Laxman, in further view of U.S. Patent No. 6,233,597 ("Miles"). Applicants respectfully traverse these rejections in view of the amendment because the cited references do not disclose or suggest all the limitations of any pending claims, as the following analysis shows.

Independent claims 1 and 11 each recite forming the first silicon oxide film at a temperature between 550 °C and 580 °C, and forming the silicon nitride film at a temperature between 580 °C and 600 °C. Chern and Laxman do not disclose or suggest using mutually exclusive temperature ranges for these two layers. In fact, Laxman teaches the use of a single temperature for all layers (column 9 lines 5-7). Claims 2-5, 7-10 depend from claim 1, while claims 12-19 depend from claim 11, and therefore contain the same limitations not disclosed or suggested by the references. Claim 6 was cancelled as redundant to the amended claim 1.

Several claims were amended to correct typographical errors and grammatical errors. These changes are not substantive and do not introduce new matter.